

EMC 351
Review for Final Exam

Cardiac A&P

- layers of heart
- heart valves
- circulation of blood through heart
- diastole/systole
- preload/afterload/cardiac output
- Frank-Starling Law of the Heart

Electrophysiology

- myocardial vs. pacemaker cells
- properties of myocardial and pacemaker cells
- depolarization/repolarization/polarization
- action potential phases (0-4)
- refractory periods
- conduction system of the heart
- causes of ectopy/dysrhythmias
- autonomic nervous system
 - sympathetic vs. parasympathetic
 - alpha, beta, and dopaminergic responses

Monitoring

- frontal plane leads
- horizontal plane leads
- standard limb leads
- modified chest leads
- unipolar vs. bipolar leads
- augmented limb leads
- Einthoven's triangle
- causes of artifact

Analyzing a Rhythm Strip

- six second method
- large box method
- small box method
- sequence method
- be familiar with the steps of analyzing a rhythm strip

Pacemaker Rhythms

- failure to pace
- failure to capture
- failure to sense
- oversensing

Miscellaneous ECG Changes

Pericarditis

- pathophysiology
- causes
- signs/symptoms
- ECG characteristics

Hyperkalemia/Hypokalemia

- pathophysiology
- causes
- ECG characteristics

Hypercalcemia/Hypocalcemia

- pathophysiology
- causes
- ECG characteristics

Digitalis Effect

- pathophysiology
- ECG characteristics

COPD

- pathophysiology
- ECG characteristics

Hypothermia

- pathophysiology
- ECG characteristics

Waves and Intervals

- be familiar with what each wave and interval represents

Characteristics and Causes of each section of arrhythmias (sinus, atrial, ventricular, blocks, etc.)

Rhythm Strip Interpretation